

Lesson 2-6

Stem-and-Leaf Plots

Lesson Objective

To make and analyze stem-and-leaf plots

NAEP 2005 Strand: Data Analysis and Probability

Topic: Data Representation

Local Standards: _____

Vocabulary

A stem-and-leaf plot is _____

Example

- ① **Interpreting a Stem-and-Leaf Plot** The times customers waited for haircuts are shown below.

Wait Times for Haircuts

0 | 1 1 3 4 5 6 9

1 | 0 0 1 3 4 4 9

2 | 1 2 4 6

3 | 0 2

Key: 0 | 5 means 5 min.

_____ customers waited more than 10 minutes.

Their times were 11, _____, 14, 14, _____, 21,

22, _____, 26, _____, and 32.

The longest wait was _____ minutes.

- a. How many customers waited more than 10 minutes?

_____ customers waited more than 10 minutes.

- b. How long was the longest wait?

The longest wait was _____ minutes.

Quick Check

1. What is the range of the data?

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Example

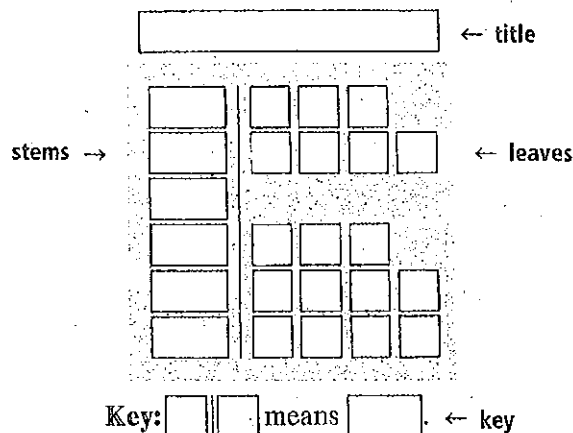
- ② **Making a Stem-and-Leaf Plot** Make a stem-and-leaf plot of the following bowling scores.

130	90	141	128	133	142
123	148	105	93	108	130
133	100	124	146	97	108

Step 1 Write the stems in order. Use the numbers in the tens and hundreds places. Draw a vertical line to the right of the stems.

Step 2 Write the leaves in order. Use the values in the ones place.

Step 3 Choose a title and include a key. The key explains what your stems and leaves represent.

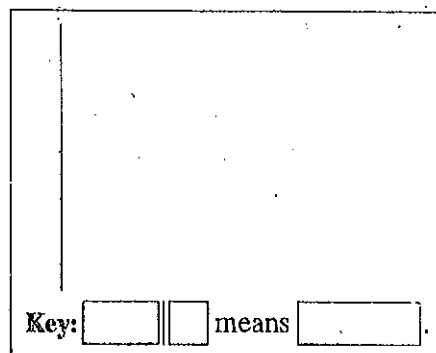


Quick Check

2. The data below show the number of students who voted for class president each year. Make a stem-and-leaf plot.

137, 125, 145, 123, 181, 132, 155, 141, 140, 133, 138, 127, 150, 126, 124, 130, 125, 138, 144, 121, 136.

(Hint: Use the ones digits for the leaves.)



Practice 2-6**Stem-and-Leaf Plots**

Use the stem-and-leaf plot for Exercises 1–5.

1. What is the age of the youngest grandparent? _____
2. How many grandparents are 79 years old? _____
3. What is the range of the data? _____
4. What is the median? _____
5. What is the mode? _____

Ages of Grandparents

stem	leaf
6	7 8 8
7	0 1 2 3 4 9 9
8	1 3 3 3 4 7
9	0 2 5

Key: 6 | 7 means 67.**Make a stem-and-leaf plot for each set of data.**

6. scores on a history test

84, 93, 72, 87, 86, 97, 68, 74, 86, 91, 64, 83

stem	leaf

Key: 6 | 4 means 64.

7. number of badges earned by local scouts

7, 12, 9, 2, 17, 24, 0, 3, 10, 20

stem	leaf

Key: 1 | 0 means 10.

8. minutes to travel to a friend's house

12, 31, 5, 10, 23, 17, 21, 12, 8, 33

stem	leaf

Key: 3 | 1 means 31.

10. Challenge- The back-to-back stem-and-leaf plot shown below displays two sets of data. Make a back-to-back stem-and-leaf plot for the data below:

Group D: 24, 26, 33, 35, 39

Group F: 25, 29, 34, 36, 37

Group A		Group B
9 5 3	2	8
1 0	3	4 7

Key:		
means < - 3	2	8 -> means
23		28

means <-

Key:

-> means